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ABSTRACT

An assessment was conducted to determine the needs of people in Appalachia for continuing education, adult education, in-service education, and undergraduate and graduate education for college credit. Needs have been categorized in five areas: education, medicine and health, business and industry, human resources and services, and government. The first section of this report provides an overview of the methodology used in the needs assessment. The next five sections report the results of needs assessment ratings, area priorities, additional needs, and utilization schedule data for each of the five areas. The last section summarizes the assessment and an appendix gives a complete list of additional needs in the five areas. (CH)

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RESULTS OF APPALACHIAN EDUCATION SATELLITE PROJECT
NEEDS ASSESSMENT CONFERENCES

U.S. DEPARTMENT OF HEALTH,
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Prepared by

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June, 1976

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The purpose of this series is to document and disseminate information about the design, implementation and results of the AESP experiment.

William J. Bramble and Cathy Hensley

Editors

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TECHNICAL REPORT SERIES

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14. Results of Appalachian Needs Assessment Conferences. Prepared by Donna M. Mertens and William J. Bramble. June, 1976.

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CHAPTER 1

INTRODUCTION

Beginning in 1971, ARC undertook a joint venture which became known as the Appalachian Education Satellite Project (AESP). This project was an experiment designed to determine the feasibility of delivering courses via satellite to sparsely populated areas in Appalachia. Due to the innovative nature of the project, AESP was relatively limited in scope and the number of participants was fairly small. AESP offered four continuing education courses for graduate college credit, two each in reading and career education. The topics for these courses were determined on the basis of a needs assessment that was sponsored by the Appalachian Regional Commission (Little, 1970).

The results of this initial effort are compiled and reported in a series of technical reports prepared by the Evaluation Component of the AESP Resource Coordinating Center in Lexington, Kentucky. Following this initial success, AESP has entered a new phase which will expand both the diversity of the programming and the range of participants. In this phase of the project, continued experimentation will focus on new ways of providing educational experiences to Appalachians using communication satellite technology. This phase, as in the past, was begun with an assessment of needs throughout the region.

Purpose

The purpose of the reported needs assessment was to determine what needs exist for the people in Appalachia in such areas as continuing education (e.g., workshops, seminars, conferences), adult education, in-service education, and undergraduate and graduate education for college credit. The needs assessment was designed to answer the following questions:

1. Are the needs, as they are reflected in the literature, an accurate representation of the needs of Appalachia?
2. What other needs exist which have not yet been documented?
3. What are the priorities in terms of each geographical area?
4. What are the priorities for the Appalachian region?
5. What days during the week and times during the day would be most desirable for broadcasting to each population?

As a first step to answering these questions, an extensive review of the literature was conducted which has been reported in AESP Technical Report 13 (Mertens and Bramble, 1976). The results of the literature review indicated that needs exist in diverse areas of Appalachia that could be categorized as follows:

1. Education
2. Medicine and health
3. Business and industry
4. Human resources and services
5. Government

The following report is divided into seven sections which provide an answer to the above questions by category. The first section provides an overview of the methodology used in the needs assessment. The following

five sections report the results of the needs assessment ratings, the area priorities, additional needs not previously considered, and utilization schedule data for each of the five areas. The final section provides a summary of the AESP needs assessment.

CHAPTER 2

METHODOLOGY

Information relative to continuing education needs in the areas of education, medicine and health, business and industry, human resources, and government was obtained from two basic sources. These included: 1) an extensive review of the literature regarding needs in the five programming areas, and 2) a series of needs assessment conferences at 12 sites in Appalachia during the Spring of 1976. The procedures used in obtaining this information and summaries of the information collected are discussed in the remainder of this report.

Literature Review

As was previously mentioned, the results of the literature review are reported in Technical Report 13; therefore, only a brief summary of the methodology and results will be presented here.

The literature review process involved three basic steps.

These were:

1. A review of general documents regarding Appalachian needs prepared by the Appalachian Regional Commission or contracting agencies to obtain information relative to needs and to identify other sources of information.
2. A general review of documents relating to Appalachian needs from materials identified through conventional library and computerized searches.

3. A review of existing materials describing local, county, district, or statewide needs within portions of the Appalachian region.

Over seventy-five documents were included in the review. Evidence was obtained for the existence of a wide variety of needs. However, in many areas where needs were indicated by general social and economic conditions no literature was identified to document specific needs. The literature review documented the existence of many areas of needs for AESP programming. However, the omission of evidence regarding additional areas of needs in the literature does not mean that these needs do not also exist. A short summary of the needs identified in each of the five program content areas follows.

1. Education Needs

The education needs of Appalachia involve the full range of educational personnel and students. Continuing and adult education needs are indicated. Inservice education for teachers has been identified as a broad need of the region. Specific inservice training needs of teachers have been identified in the areas of reading, special education, early childhood education, information resources, career counseling, career education, vocational education, etc. Other need areas emphasized in the literature include individualized instruction, especially for disadvantaged students; developmental programs for improving students' skills in mathematics, reading, communication and socialization; and techniques for increasing parental involvement in the schools.

2. Medical and Health Needs

Medical and health services pose a special problem in Appalachia, not only in terms of continuing education for medical and health

personnel, but also in providing for the consumer's needs. The medical and health personnel include physicians, physician's assistants, nurses, mental health personnel, and allied health personnel. Consumer needs in the health area include both education and services. While the literature confirms the existence of general medical and health needs, comprehensive assessments of the region's specific needs are not available.

3. Government Needs

Government operates at many levels in Appalachia. Federal, state, and local government personnel in Appalachia have many information needs that are emphasized by the isolation caused by the terrain. In Appalachia another unique level of government, the Local Development District (LDD), was instituted to help bridge the gap between the largeness of the state governments and the smallness of local jurisdictions. No vigorous assessment of the needs of federal, state, local, and development district personnel has yet been undertaken. However, important needs that have been of concern to the LDD's have included data processing, community facilities utilization, industrial and economic development, fiscal and administrative operations, coordination of social services, development of community college programs, and solid waste recycling. Federal and state governments have voiced concern over the continuing need for more comprehensive transit systems for rural areas. The change in the health services areas and the growing emphasis on primary health care present government agencies in Appalachia with many new problems. Finally, leadership training for government personnel was

noted as a strong need. Because of the lack of research to date in this area, many other needs undoubtedly exist which simply have not been cited in the literature.

4. Business and Industry

Economic development has long been a prime concern in the Appalachian region, and ARC has realized the importance of this development since its beginning. Though adequate needs assessments have not been conducted, the indications are that there are needs in at least the areas of continuing education programs for business, technical assistance for business, manpower training, planning for industrial development, energy conservation and production, and in the area of the interplay between economic energy development and environmental control. Because of the paucity of data concerning the overall education and information needs of business and industry in Appalachia, these needs should be viewed as tentative.

5. Human Resources and Services Needs

The development of human resources is one of the most pressing needs of Appalachia. Areas of deprivation in human resources identified by ARC include low income, high unemployment, lack of urbanization, deficits in education, and deficits in living standards. Areas for development of human resources which have been mentioned by ARC include education for employment, vocational rehabilitation for the mentally and physically disabled, employment services, nutrition, and housing. The human resource needs of Appalachia have not been extensively studied. Several

needs, however, are based on the limited information available at this time. These include continuing education for social service personnel, education relative to Appalachia's recreational development, and education of Appalachia's adult population and of the teachers needed for adult education.

Needs Assessment Conference Procedure

During the months of March through May 1976, meetings were held at 12 Appalachian sites to try to identify firsthand the educational and service needs in the areas of education, medical and health services, government, business and industry, and human resources and services. One-day meetings were conducted for this purpose at Huntsville, Alabama; Atlanta, Georgia; Natural Bridge, Kentucky; Jackson, Mississippi; Jamestown, New York; Boone, North Carolina; Columbus, Ohio; Harrisburg, Pennsylvania; Greenville, South Carolina; Knoxville, Tennessee; Wise, Virginia, and Cacapon, West Virginia. These meetings were attended by AESP representatives from ARC and the RCC at the University of Kentucky, as well as by local representatives from each of the five areas of needs.

Although part of Maryland is in the Appalachian region, no needs assessment conference was held in that state because the Regional Education Service Agency of Appalachian Maryland had sponsored a planning seminar one month prior to the needs assessment conferences. The purpose of the meeting was to inform leaders from the Region and the State of the potential for expanding the use of Applications Technology Satellites in Appalachia. While this meeting resulted in the generation of many new ideas on programming, activities, and organizational structures, the needs assessment forms were not available at the time of this meeting. Nevertheless, the views of

Maryland representatives are included in this report because the meeting that was held in Cacapon, West Virginia included representatives from both Maryland and West Virginia.

Over 400 local representatives attended the 12 needs assessment conferences or, in a small number of cases, furnished information while not able to attend the meetings. Forms designed to assess local needs were completed by a total of 381 of these persons. The distribution of local representatives completing the forms is shown in Table 1. There were 121 representatives from the education area, 92 from the medical and health area, 51 from business and industry, 63 from human resources and services, and 54 representing government at various levels. A more comprehensive picture of the participants is provided for each programming area in the following sections. The task of inviting representatives of the five need areas was the responsibility of the local Regional Education Service Agency (RESA), Local Development District (LDD), or other agency which served as host for each meeting.

While the procedure followed at each meeting varied somewhat from site to site, basically the same pattern was followed. A general overview of AESP was given by the attending AESP personnel. Individuals selected to represent each of the five need areas presented short summaries of local needs. Following these presentations, attendees divided into small groups based on the subject areas they represented. Needs assessment forms which had been developed by the RCC Evaluation Component based on the review of the literature relative to Appalachian needs were completed. The forms instructed the participants to rate the list of needs according to the following scale:

TABLE 1

FREQUENCY OF PARTICIPANTS AT EACH MEETING LOCATION BY SUBJECT AREA

	Virginia	North Carolina	Alabama	West Virginia	Tennessee	Ohio	Georgia	South Carolina	Mississippi	New York	Kentucky	Pennsylvania	Sub-Total
Education	6	6	11	25	10	8	2*	5	11*	12	11	14	121
Medical & Health	1	4	7*	21	13	13*	0	5*	7*	9	7	4	92
Business & Industry	3	3	5	11	4	2*	2*	0	3	7	7	4	51
Human Resources	4	2	3	15	13	1	0	1	3	7	7	7	63
Government	0	2	9*	10	1	2*	0	0	8	9	6	7	54
Sub-Total	14	17	35	82	41	26	4	12	32	44	38	36	381

*includes mailed in responses

- 1 -- extremely strong need
- 2 -- very strong need
- 3 -- strong need
- 4 -- moderate need
- 5 -- little need
- 6 -- very little need
- 7 -- no need

The form also allowed the participants an opportunity to add and rate any additional needs which had not been previously listed on the assessment form. In addition, a utilization schedule form was completed by each participant, which provided information concerning the days of the week, times of the day, and program format which would be best to reach their target audience.

Following the completion of these forms, each group of participants worked together to identify the five priority needs within their subject area, discussed the evidence to support the existence of these priority needs, and identified ways that AESP could best serve these needs.

Thus the needs assessment conferences yielded the following types of information:

- 1. Identification information concerning the participants
- 2. Ratings of a list of needs
- 3. List of additional needs not previously contained on the assessment form
- 4. Utilization schedule data
- 5. List of priority needs for each area, along with evidence of their severity, and ways that AESP could best serve those needs.

Data Analysis

The following procedures were used for data analysis.

The identification information was synthesized and compiled according to the positions held by each participant by subject matter area.

The ratings of the needs were combined across sites. Mean, standard deviation, and frequency were computed for each need rated. Each participant's rating was given equal weight no matter at which site the rating was obtained.

The additional needs that are reported in the text are those which appeared at more than one site. A complete list of the additional needs is included in the Appendix.

The utilization scheduling data was combined across sites, and similar trends are reported for each subject area.

The list of priority needs has been synthesized, the results are reported by state and by subject area. No priorities were established in Georgia, South Carolina, or Mississippi because the format of the meetings at those locations did not allow adequate time for such discussion. Therefore, the results of priority identification are reported for only 9 of the 12 states involved.

Limitations

The results of the needs assessment must be interpreted in view of the following limitations:

1. The method of selecting participants was not consistent and systematic from site to site. The results do not reflect an unbiased, random sample.

2. The time and length of the conference may have prohibited certain members of the community from participating. For example, even though the needs of teachers and physicians were rated, very few people who are actually engaged in these occupations were present.
3. Participants were instructed to use their best judgment and to try to rate all of the items; therefore, each rating is not based on a similar level of experience. For example, a nursing educator's rating of the allied health needs may not be as valid as that of an allied health educator.
4. At some sites, certain subject areas had no or very few representatives; therefore, the needs for that subject area at that site are not well-represented.
5. Analyzing the needs ratings by combining over sites does not allow for an equally weighted expression of needs for each site. For example, over 100 people attended the meeting in West Virginia, and only 4 people rated the needs in Georgia. Therefore, the ratings of the needs in West Virginia are given more weight than those from Georgia.
6. The results reflect only the perceived needs of the local representatives and not a quantitative assessment of the discrepancies between the current status and the desired goals of the region.

Despite these limitations, the results of the needs assessment appear to have face validity based on the consistency of priorities identified by the various methods described earlier. Similarities were consistently found concerning the importance of needs identified in the literature, by the ratings of the needs assessment forms, and by the listing of priority needs. In addition, the majority of the needs rated on the assessment forms received very strong ratings, thus supporting the literature on which the lists were based.

CHAPTER 3

EDUCATION

The educational needs of the region span the range of continuing education for the educational personnel to providing programming directly to the students in Appalachia. The needs which were examined in this series of conferences were those of inservice training for elementary and secondary teachers in specific content areas as well as for skills and strategies, educational issues, special education both for the regular classroom teacher and the special education teacher, career counseling, early childhood education, vocational education, and information systems. For each of these areas, the ratings of the needs and the additional needs, are presented below. In addition the identified priorities and utilization schedule data are discussed.

The frequency of the participants by position held in the educational field is presented in Table 2. The largest contingencies represented the colleges and universities and the educational service agencies of the region. While the teacher representation per se is rather low (3 out of 121), it could be assumed that the other representatives are informed of their needs and could reflect them validly.

Inservice Education for Elementary Teachers: Content Areas

The ratings of the inservice education needs for elementary teachers in specific content areas was generally high. They ranged from 1.81 to 3.31,

TABLE 2

FREQUENCY OF PARTICIPANTS IN EDUCATION BY POSITION IN WHICH EMPLOYED

College or university	30
Educational service agency	30
Board of Education	17
State Department of Education	15
State Vocational Education	4
Library, Media, ETV	4
County school district	3
Teacher (elementary or secondary)	3
Principal	3
Rehabilitation for mentally and physically disabled	2
Other State agencies	2
Head Start	2
Other	<u>6</u>
Total	121

with a rating of 1-2 indicating a very strong need and a rating of 3-4 indicating a strong to moderate need. The results of the ratings are presented in Table 3. The strongest needs were indicated in the following areas:

1. reading ($\bar{X} = 1.81$)
2. oral and written communication ($\bar{X} = 2.08$)
3. special education ($\bar{X} = 2.13$)
4. mathematics ($\bar{X} = 2.31$)
5. consumer education ($\bar{X} = 2.42$)

While many other needs were regarded as being important, the exclusion of a particular content area need in this summary of results does not mean that it was not viewed as important. These findings suggest that the needs found in the literature continue to be those of concern for Appalachians.

Needs which were added to the list at more than one site included:

1. early childhood education
2. mainstreaming
3. metric system
4. parent education
5. international education
6. fine arts

Early childhood education and mainstreaming are both included in separate categories later in this report. A complete list of the additional needs from all of the sites is included in the Appendix.

TABLE 3
EDUCATION:
INSERVICE EDUCATION FOR ELEMENTARY TEACHERS

	$\bar{X}$	sd	n
1. Reading	1.81	1.19	112
2. Oral and written communication	2.08	1.29	110
3. Special education	2.13	1.19	111
4. Mathematics	2.31	1.10	110
5. Consumer education	2.42	1.29	112
6. Career education - awareness	2.49	1.34	108
7. Affective education	2.50	1.24	105
8. Health education	2.50	1.18	109
9. Career education - exploration	2.56	1.36	90
10. Vocational education	2.67	1.46	110
11. Science	2.87	1.06	108
12. Cultural and community diversity	2.95	1.36	110
13. Humanities	2.98	1.24	109
14. Social sciences	3.13	1.12	109
15. Leisure time education	3.20	1.45	109
16. Physical education	3.22	1.46	108
17. Culture of Appalachia	3.31	1.53	109

Inservice Education for Secondary Teachers: Content Areas

The ratings of the inservice education needs for secondary teachers in specific content areas were generally high with a range of 1.80 to 3.62. The results of the ratings are presented in Table 4. The strongest needs were indicated in the following areas:

1. oral and written communication ($\bar{X}$ = 1.80)
2. reading - remedial ($\bar{X}$ = 1.94)
3. consumer education ($\bar{X}$ = 2.13)
4. career education - preparation ($\bar{X}$ = 2.20)
5. special education ($\bar{X}$ = 2.32)

Four of the five top needs for elementary and secondary teachers overlap, suggesting a consistency in the deficits of the Region. Once again, the results are consistent with the needs cited in the literature, especially concerning reading, career education, and special education.

Needs which were added to the list at more than one site included:

1. languages
2. fine arts
3. parent education

The addition of parent education occurred at the majority of sites by both educators and human resources personnel. The participants indicated that such education should also be directed to potential parents in order to make them more effective parents.

Inservice Training for Teachers: Skills and Strategies

The ratings of the inservice education needs for skills and strategies for both elementary and secondary teachers were very high, ranging from 1.72 to 2.92. The results of the ratings are presented in Table 5.

TABLE 4
 EDUCATION:
 INSERVICE EDUCATION FOR SECONDARY TEACHERS

	$\bar{X}$	sd	n
1. Oral and written communication	1.80	1.10	114
2. Reading - remedial	1.94	1.11	112
3. Consumer education	2.13	1.21	115
4. Career education - preparation	2.20	1.32	108
5. Special education	2.32	1.24	108
6. Vocational education	2.34	1.31	112
7. Mathematics	2.39	1.18	111
8. Affective education	2.51	1.35	105
9. Health education	2.64	1.22	110
10. Cultural and community diversity	2.85	1.39	109
11. Science	2.96	1.07	111
12. Humanities	3.06	1.26	111
13. Leisure time education	3.06	1.50	108
14. Social sciences	3.12	1.05	110
15. Culture of Appalachia	3.22	1.52	109
16. Physical education	3.62	1.50	107

TABLE 5
EDUCATION:
SKILLS AND STRATEGIES FOR CLASSROOM TEACHERS

	$\bar{X}$	sd	n
1. Strategies for motivating students	1.72	.99	114
2. Techniques for individualizing instruction	1.92	1.11	115
3. Strategies for parent involvement in child's education	1.97	1.17	115
4. Strategies for teaching fast and slow learners	2.01	1.16	114
5. Strategies for promoting independence and self-direction in students	2.03	1.20	115
6. Use of problem solving and decision making strategies	2.05	1.13	114
7. Techniques for improving human relation skills	2.06	1.13	115
8. Identification and prevention of potential drop-outs	2.08	1.16	112
9. Instructional design and implementation	2.11	1.00	111
10. Utilizing diagnostic and prescriptive instruction	2.11	1.06	112
11. Inquiry discovery techniques of instruction	2.33	1.02	113
12. Strategies for enhancing creativity	2.38	1.28	114
13. Strategies for teaching culturally different learners	2.40	1.27	111
14. Application of human development concepts in instruction	2.41	1.27	114
15. Interdisciplinary approaches to instruction	2.47	1.16	114
16. Utilization of paraprofessionals	2.75	1.20	110
17. Application of educational and learning theories	2.78	1.33	112
18. Utilization of classroom consultants	2.88	1.37	112
19. Utilization and interpretation of standardized tests	2.92	1.38	113

The strongest needs were indicated in the following areas:

1. strategies for motivating students ($\bar{X} = 1.72$)
2. techniques for individualizing instruction ($\bar{X} = 1.92$)
3. strategies for parent involvement in child's education ($\bar{X} = 1.97$)
4. strategies for teaching fast and slow learners ($\bar{X} = 2.01$)
5. strategies for promoting independence and self-direction in students ($\bar{X} = 2.03$)

While all of the needs received, at the least, strong ratings in this area, the top five have been frequently cited in the literature as presenting challenges to the Appalachian educator.

Needs which were added to the list at more than one site included:

1. parent education
2. grading techniques
3. teaching the gifted student

Thus, the educators reinforced the strength of the need for parent education by indicating a desire for learning strategies to teach the subject. In addition a need to learn strategies for teaching the gifted student was frequently noted, and in the special education section reported later the characteristics of the gifted received a very strong rating.

Educational Issues

The ratings of the educational issues were fairly high, with a range of 2.38 to 3.11. The results of the ratings are presented in Table 6. The strongest needs were indicated in the following areas:

1. teacher evaluation ($\bar{X} = 2.38$)
2. system- and state-wide programs on accountability ($\bar{X} = 2.65$)

TABLE 6
EDUCATION:
EDUCATIONAL ISSUES

	$\bar{X}$	sd	n
1. Teacher evaluation	2.38	1.25	112
2. System- and state-wide programs on accountability	2.65	1.27	107
3. Federal and state legislation pertaining to education	2.83	1.52	111
4. Governance of educational system	3.11	1.44	108

While all of the needs received a strong to moderate rating, no definitive body of literature has yet to be compiled for such needs. Therefore, the additional needs for this category are all the more informative. Needs which were added to the list at more than one site included:

1. educational financing
2. legal aspects of education
3. accountability
4. professional development

Thus, although very little literature exists concerning the needs regarding educational issues, the educators indicated that such needs exist by rating the items high and by consistently adding a number of other issues.

Special Education Training for Regular Classroom Teachers

With the advent of large scale mainstreaming, regular teachers are expected to integrate the exceptional child into a classroom, often with no training related to techniques for instructing them. It is not surprising,

therefore, that the ratings for needs in special education for regular classroom teachers were rated very high, with a range of 1.81 to 2.40. The results of the ratings are presented in Table 7. The strongest needs were indicated in the following areas:

1. characteristics of the gifted ($\bar{X} = 1.81$)
2. characteristics of the learning disabled ($\bar{X} = 1.87$)
3. characteristics of the emotionally disturbed ($\bar{X} = 1.92$)
4. diagnosis and management of exceptional children ($\bar{X} = 1.96$)
5. identification of exceptional children ($\bar{X} = 1.98$)

Because very specific information concerning the needs of teachers in the area of mainstreaming was not previously available, this information is particularly useful.

Needs which were added to the list at more than one site included:

1. skills for teaching the sensory impaired
2. assisting parents in teaching the handicapped child
3. mainstreaming

Thus, in addition to the other categories of exceptional children, the educators indicated a need to train the teacher to deal with the sensory impaired student. Also, another form of parent education was noted, that of training parents to teach their handicapped children.

Training for the Special Education Teacher

The role of the special education teacher in dealing with the exceptional child would be expected to be quite different from that of the regular classroom teacher. The ratings indicate that the educators perceived this distinction. The ratings were still fairly high with a range of 2.05

TABLE 7
EDUCATION:
SPECIAL EDUCATION TRAINING FOR THE REGULAR CLASSROOM TEACHER

	$\bar{X}$	sd	n
1. Characteristics of the gifted	1.81	1.11	105
2. Characteristics of the learning disabled	1.87	1.08	102
3. Characteristics of the emotionally disturbed	1.92	1.11	103
4. Diagnosis and management of exceptional children	1.96	1.22	105
5. Identification of exceptional children	1.98	1.27	108
6. Early childhood education for mixed handicapped	2.15	1.29	101
7. Academic skills: language, reading, and arithmetic	2.22	1.20	106
8. Characteristics of the retarded	2.26	1.23	102
9. Characteristics of the physically handicapped	2.32	1.26	101
10. Characteristics of the brain damaged	2.38	1.32	100
11. Social skill learning	2.40	1.15	105

to 2.74. The results of the ratings are presented in Table 8. The strongest needs were indicated in the following areas:

1. diagnosis and management of exceptional children ($\bar{X} = 2.05$)
2. characteristics of the gifted ($\bar{X} = 2.21$)
3. early childhood education for the mixed handicapped ($\bar{X} = 2.27$)
4. academic skills: language, reading, and arithmetic ($\bar{X} = 2.28$)
5. identification of exceptional children ($\bar{X} = 2.30$)

The focus seems to have shifted from a simple knowledge of the exceptional child's characteristics to a more active teaching role. Nevertheless, the educators reinforced the desire to learn more about the gifted student.

TABLE 8
EDUCATION
TRAINING FOR THE SPECIAL EDUCATION TEACHER

	$\bar{X}$	sd	n
1. Diagnosis and management of exceptional children	2.05	1.22	101
2. Characteristics of the gifted	2.21	1.44	101
3. Early childhood education for mixed handicapped	2.27	1.27	97
4. Academic skills: language, reading, and arithmetic	2.28	1.28	101
5. Identification of exceptional children	2.30	1.44	99
6. Characteristics of the emotionally disturbed	2.35	1.37	100
7. Characteristics of the learning disabled	2.38	1.40	99
8. Social skill learning	2.43	1.25	102
9. Characteristics of brain damaged	2.60	1.41	99
10. Characteristics of the retarded	2.70	1.43	100
11. Characteristics of the physically handicapped	2.74	1.47	99

Needs which were added to the list at more than one site included:

1. skills for dealing with the profoundly retarded
2. skills for dealing with the sensory impaired
3. materials identification

The participants thus indicated that both the regular teacher and the special education teacher needs to learn to work with the sensory impaired. In addition the special education teacher must learn to deal with the profoundly retarded, a child who would most likely not be mainstreamed.

Career Counseling

The ratings for career counseling were all fairly high, with a range of 2.37 to 2.91. The results of the ratings are presented in Table 9.

The strongest needs were indicated in the following areas:

1. self-analysis and career decision making ($\bar{X} = 2.37$)
2. career counseling in the curriculum ($\bar{X} = 2.39$)
3. implementing a career education/counseling program ($\bar{X} = 2.39$)

The need for career education and career counseling is strongly suggested in the literature also.

Needs which were added to the list at more than one site included:

1. diagnostic programs
2. follow-up strategies

Thus, the educators indicated a need to learn more of the specific aspects of operationalizing a career counseling program.

Early Childhood Education

Early childhood education has long been recognized as a priority area by ARC, and the participants' ratings indicated that this was still a very strong need area. The ratings ranged from 1.74 to 2.46. The results of the ratings are presented in Table 10. The strongest needs were indicated in the following areas:

1. parent involvement ($\bar{X} = 1.74$)
2. positive self-image ($\bar{X} = 1.86$)
3. language and verbal skills ($\bar{X} = 2.08$)

Once again, the involvement of the parents is a concept which is emphasized. The one need which was added at more than one site was that of infant education (birth to 3 years).

TABLE 9
EDUCATION:
CAREER COUNSELING

	$\bar{X}$	sd	n
1. Self-analysis and career decision making	2.37	1.34	107
2. Career counseling in the curriculum	2.39	1.34	105
3. Implementing a career education/counseling program	2.39	1.37	107
4. Job placement service	2.47	1.31	111
5. Resources for career counseling program	2.62	1.37	109
6. Theories and phases of career development	2.80	1.33	103
7. Meeting the needs of special interest groups	2.91	1.40	103

TABLE 10
EDUCATION:
EARLY CHILDHOOD EDUCATION

	$\bar{X}$	sd	n
1. Parent involvement	1.74	.95	106
2. Positive self-image	1.86	1.13	107
3. Language and verbal skills	2.08	1.06	106
4. Behavior management for classroom and home	2.11	1.11	105
5. Social development	2.35	1.13	104
6. Curriculum and teaching techniques	2.38	1.16	104
7. Psycho-motor development	2.39	1.14	104
8. Kindergarten for 5-year old	2.41	1.32	103
9. Cognitive development	2.41	1.15	103
10. Preschool program for 3-4 year old	2.46	1.41	103

Vocational Education

The ratings for vocational education overall were lower than the other areas, yet the range was still fairly high (2.36 to 3.42). The results of the ratings are indicated in Table 11. The strongest needs were identified in the following areas.

1. use of work-study curriculum for on-the-job training ($\bar{X} = 2.36$)
2. distributive education ($\bar{X} = 3.13$)

The participants added the following needs:

1. trade and industrial education
2. small business operations

Vocational education has long been a priority area for ARC, and the ratings seem to indicate that the need for additional services is in the moderate range.

Information Systems

The ratings for continuing education in the area of information systems were fairly high with a range of 2.14 to 2.84. The results of the ratings are presented in Table 12. The strongest needs were indicated in the following areas:

1. development of learning centers ($\bar{X} = 2.14$)
2. updating subject matter content ($\bar{X} = 2.22$)
3. utilization of instructional media and technology ($\bar{X} = 2.23$)

The educators also added:

1. use of computerized simulations
2. retrieval system

Both of these additional needs would appear to be suitable for satellite delivery.

TABLE 11
EDUCATION:
VOCATIONAL EDUCATION

	$\bar{X}$	sd	n
1. Use of work-study curriculum for on-the-job training	2.36	1.20	106
2. Distributive education	3.13	1.35	102
3. Industrial arts education	3.14	1.30	105
4. Business and office education	3.15	1.28	105
5. Home economics education	3.22	1.34	105
6. Agricultural education	3.42	1.50	105

TABLE 12
EDUCATION:
INFORMATION SYSTEMS

	$\bar{X}$	sd	n
1. Development of learning centers	2.14	1.20	110
2. Updating subject matter content	2.22	1.17	111
3. Utilization of instructional media and technology	2.23	1.18	110
4. Planning multi-media learning experiences using information and library sources	2.31	1.22	111
5. Accessing local and regional sources of information	2.44	1.20	112
6. Identifying and locating library and other information sources	2.68	1.34	111
7. Use of computerized information retrieval systems	2.84	1.40	104

Priority Needs Identification

The results of the priority needs identification for education are shown in Table 13. The meeting by meeting breakdown given for the 15 different priorities in education which were mentioned is shown in the table with X's denoting the fact that the particular need was listed among the top five at the meeting.

Several consistent findings across meetings support the findings indicated by the literature review, the ratings of the needs, and the additional needs mentioned on the rating forms. Inservice training for teachers and administrators in such areas as human relations skills, curriculum design, affective education, interdisciplinary education, value clarification, management, and competency-based instruction was mentioned as a priority in 8 of the 9 states where priorities were identified in the education area. This agrees with the very strong ratings found for the skills and strategies need category overall.

A second very strong pattern across sites appeared for programming for parents and educators in parenting skills, including child development and family relationship. Skills and strategies for teaching parent education was added to the inservice education needs of secondary teachers at the majority of the sites. It also received a very strong rating in the areas of special education and early childhood education.

Other very consistently mentioned priorities were: 1) career and consumer education for students, teachers, and the general public; and 2) inservice training in dealing with the exceptional child. Both of these areas received very strong ratings on the needs assessment form.

TABLE 13

EDUCATION:
RESULTS OF PRIORITY NEEDS IDENTIFICATION BY LOCATION

	Virginia	North Carolina	Alabama	West Virginia	Tennessee	Ohio	Georgia	South Carolina	Mississippi	Kentucky	Pennsylvania	New York
1. Inservice training for teachers and administrators, including such areas as human relations skills, curriculum design, affective education, interdisciplinary education, value clarification, management, and competency based instruction	X	X	X		X	X				X	X	X
2. Programming for parents and educators in parenting skills, including child development, and family relationship problems	X	X	X		X						X	X
3. Programming in the arts for parents and students	X											
4. Career and consumer education for students, teachers, and the general public	X					X				X	X	X
5. Programming to improve the community-school, and university-school relationships and other intra-agency relationships	X	X			X							

TABLE 13--CONTINUED

	Virginia	North Carolina	Alabama	West Virginia	Tennessee	Ohio	Georgia	South Carolina	Mississippi	Kentucky	Pennsylvania	New York
6. Inservice training in dealing with the exceptional child		X	X	X	X					X		X
7. Reading and writing, in content areas in secondary education			X						X	X		
8. Information retrieval systems			X			X						
9. Early childhood education				X		X						
10. Training of paraprofessionals				X								X
11. Post-secondary and adult education				X						X		X
12. Low incidence courses in professional training				X								
13. Media and resource materials distribution												
14. Cultural heritage programming					X						X	
15. Industrial arts/vocational education											X	

Utilization Data

Although the exact utilization scheduling will depend on the target audience and the type of course, a number of similar patterns emerged across sites for the days and times that would be best to reach various target audiences. Generally, programming for teachers would have to be in the late afternoon or early evening on weekdays, or on Saturdays, unless release time could be arranged during school hours. Other educational personnel have somewhat more flexible scheduling and could probably receive programming during the 8:00 to 5:00 working day. Programs aimed at students should be broadcast during school hours. Programs for parents and other community members should be broadcast in the early evening, except for special programs which might be broadcast during the late morning or early afternoon. Enrichment programs for students as well as inservice training for teachers might also be broadcast during the summer months.

CHAPTER 4

MEDICINE AND HEALTH

Medical and health services pose a special problem in Appalachia, not only in terms of continuing education for the medical and health personnel, but also in providing for the consumer's needs. The report which follows includes the results of the assessment of needs for physicians and physician's assistants, mental health professionals, nurses, allied health personnel, and consumers. Consumers' needs are discussed both in terms of education and services. While the literature generally confirms the existence of medical and health needs, no comprehensive assessment of the Region's specific needs previously existed.

The frequency of the participants by position held in the medical and health field is presented in Table 14. The largest group represented hospitals, with personnel involved in administration, nursing, and medical education. A large number of representatives were also present from regional health departments and health planning agencies.

Physicians and Physician's Assistants

The inservice needs for physicians and physician's assistants were rated from strong to moderate with a range of 2.28 to 3.79. The results of the ratings are presented in Table 15. The strongest needs were indicated in the following areas:

TABLE 14

FREQUENCY OF PARTICIPANTS IN MEDICINE AND HEALTH BY POSITION IN
WHICH EMPLOYED

Hospital	
Administrator	16
Nursing	9
Medical education	5
Health department	12
Health planning	11
Rehabilitation services for physically or mentally disabled	6
Mental health	6
Health education center	4
College or university	
Nursing	4
Administrator	3
Continuing education	1
Preventive dentistry	3
Human resources	2
State health programs	2
Emergency medical services	2
Other	6
Total	92

TABLE 15
 MEDICINE AND HEALTH:
 PHYSICIANS AND PHYSICIAN'S ASSISTANTS

	$\bar{X}$	sd	n
1. Mental illness, personality disorder, and psychoneurosis	2.28	1.35	75
2. Problems other than specific diagnostic/symptomatic (e.g., economic, family relationship problems)	2.44	1.49	70
3. Information retrieval and search systems	2.62	1.47	60
4. Access to specialists	2.64	1.63	76
5. Allergic, endocrine, metabolic, and nutritional disorders	2.66	1.38	65
6. Diseases of early infancy	2.76	1.45	67
7. Signs, symptoms, and ill-defined conditions	2.86	1.62	63
8. Accidents, poisonings, and violence	2.87	1.52	69
9. Pregnancy, parturition, and puerperium	3.01	1.56	69
10. Prophylactic procedures	3.11	1.65	65
11. Respiratory system diseases	3.23	1.57	69
12. Diseases of the blood and blood forming organs	3.25	1.43	59
13. Circulatory system diseases	3.28	1.45	65
14. Congenital malformations	3.28	1.56	65
15. Nervous system and sense organ diseases	3.29	1.19	62
16. Communicable diseases	3.34	1.44	68
17. Neoplasms	3.45	1.40	49
18. Diseases of bones and organs of movement	3.47	1.28	60
19. Digestive system diseases	3.51	1.53	67
20. Genitourinary system diseases	3.67	1.17	58
21. Skin and cellular tissue diseases	3.79	1.31	57

1. mental illness, personality disorder, and psychoneurosis ($\bar{X} = 2.28$)
2. problems other than specific diagnostic/symptomatic (e.g., economic, family relationship problems) ($\bar{X} = 2.44$)
3. information retrieval and search systems ($\bar{X} = 2.62$)
4. access to specialists ($\bar{X} = 2.64$)

These top rated needs tend to support what little literature is available concerning the medical and health problems faced by a physician practicing in the remote areas of Appalachia. The needs for continued education, information about current advances, and access to specialists have been widely recognized as presenting a particular challenge to the physician practicing in rural Appalachia. Evidence is scarce as far as particular areas of medicine which need to be pursued further. Because no supporting evidence is available beyond the general needs noted above, these results should be considered as tentative.

Needs which were not previously listed included:

1. community health education
2. nurse practitioners as physician's assistant

Thus the participants indicated the importance of the primary health care concept which is becoming stronger in Appalachia.

Mental Health Professionals

The ratings of the needs for mental health professionals were rather high, with a range of 2.21 to 2.87. The results are presented in Table 16. The strongest needs indicated were:

1. treating alcoholism ($\bar{X} = 2.21$)
2. family therapy ($\bar{X} = 2.29$)
3. depression ($\bar{X} = 2.37$)

TABLE 16
 MEDICINE AND HEALTH:
 MENTAL HEALTH PROFESSIONALS

	$\bar{X}$	sd	n
1. Treating alcoholism	2.21	1.31	70
2. Family therapy	2.29	1.45	70
3. Depression	2.37	1.38	70
4. Treating anxiety	2.48	1.41	66
5. Application of behavior modification	2.87	1.51	68

The participants also added:

1. community education
2. mentally retarded
3. treating drug abuse

The literature supports these findings in that the most prevalent reported mental health problems were anxiety, stress, depression, family and child related problems, and alcoholism.

Nurses

The ratings of the needs for nurses were fairly high, with a range of 2.00 to 3.33. The results are presented in Table 17. The strongest needs indicated were:

1. communication skills ($\bar{X}$ = 2.00)
2. physical assessment skills ($\bar{X}$ = 2.10)
3. the nurse's role in primary health care ($\bar{X}$ = 2.31)
4. critical care and trauma nursing ($\bar{X}$ = 2.32)
5. child abuse ($\bar{X}$ = 2.35)

TABLE 17
 MEDICINE AND HEALTH:
 NURSES

	$\bar{X}$	sd	n
1. Communication skills	2.00	1.14	76
2. Physical assessment skills	2.10	1.34	67
3. The nurse's role in primary health care	2.31	1.43	77
4. Critical care and trauma nursing	2.32	1.50	66
5. Child abuse	2.35	1.37	79
6. Drugs	2.37	1.30	75
7. Family counseling	2.37	1.33	80
8. Alcoholism	2.39	1.44	80
9. Drugs: use and abuse	2.40	1.21	78
10. Drugs: actions and interactions	2.41	1.27	79
11. Mental health nursing	2.41	1.32	76
12. Cardiac assessment in pediatric nursing	2.46	1.27	61
13. Death and dying	2.49	1.54	80
14. Care of the burned patient	2.51	1.37	68
15. Geriatric nursing	2.51	1.29	75
16. Implications of the patient's cultural background for nursing	2.54	1.31	72
17. Utilizing health care technology	2.63	1.33	74
18. Counseling the victim of sexual assault	2.63	1.57	67
19. Therapeutic nutrition	2.63	1.32	73
20. Human sexuality	2.66	1.37	71
21. Fetal monitoring in obstetric nursing	2.68	1.46	70

TABLE 17--CONTINUED

	$\bar{X}$	sd	n
22. Growth and development in pediatric nursing	2.70	1.38	70
23. Infection control	2.72	1.34	74
24. Assertiveness training	2.74	1.71	58
25. Pediatric nursing	2.75	1.26	64
26. School nursing	2.79	1.58	66
27. Disaster nursing	2.80	1.58	69
28. Preschool children-pediatric nursing	2.80	1.41	70
29. Stroke victims	2.80	1.36	70
30. Instrumentation used in cardiopulmonary care	2.83	1.54	65
31. Legal aspects of nursing	2.84	1.68	75
32. Diabetes	2.99	1.41	74
33. Respiratory disease	3.01	1.42	73
34. Maternity nursing	3.01	1.53	72
35. Cardiovascular nursing	3.03	1.47	67
36. Obstetric and gynecologic nursing	3.09	1.48	69
37. Cancer nursing	3.11	1.55	70
38. Pain	3.28	1.56	75
39. Fundamentals of electrical safety	3.31	1.70	64
40. Lamaze training	3.33	1.76	51
41. Renal functioning	3.33	1.33	67

While a great deal of information is not available concerning the continuing education needs of nurses, it is recognized that because of the scarcity of physicians, the nurse is often called upon to do things for which she has not been adequately trained. A survey of the nursing personnel in the Region did support the need for the acquisition of physical assessment skills by nurses.

The medicine and health representatives from at least two sites added the following needs:

1. leadership training
2. principles of management and supervision
3. graduate courses in nursing
4. rehabilitation care
5. patient teaching
6. trauma patients

A strong need for continuing education for nurses in many areas and at many levels was indicated.

Allied Health

The needs for allied health personnel were rated for community health specialists, dental assistants and hygienists, dietitians, emergency medical personnel, physical therapists, medical technologists, nurse's aides and radiologic technologists. The ratings ranged from very strong to moderately strong. The results are presented in Table 18. The strongest needs for each allied health group were:

1. community health specialist (range 1.84 to 2.66)
- health education ($\bar{X}$ = 1.84)
2. dental assistant and hygienist (range 2.00 to 2.91)
- patient education ($\bar{X}$ = 2.00)

TABLE 18

MEDICINE AND HEALTH:
ALLIED HEALTH PERSONNEL

	$\bar{X}$	sd	n
Community health			
a. health education	1.84	1.31	81
b. health programming in the community	2.06	1.36	79
c. environmental health	2.16	1.40	77
d. health services administration	2.66	1.62	76
Dental assistant and hygienist			
a. patient education	2.00	1.27	57
b. restorative dentistry	2.57	1.39	56
c. current advances	2.65	1.52	52
d. basic training	2.91	1.75	54
Dietitian			
a. current advances	2.35	1.55	62
b. basic training	2.53	1.63	58
c. nutritional implications of heart disease	2.53	1.61	60
d. nutritional implications of stroke	2.67	1.63	58
e. nutritional implications of cancer	2.69	1.65	58
Emergency medical personnel			
a. current advances	2.46	1.76	74
b. basic training	2.59	1.81	75
Physical therapy			
a. spinal cord injury evaluation and management	2.60	1.52	55
b. stress testing and evaluation	2.71	1.65	52
c. current advances	2.77	1.67	62
d. basic training	2.95	1.83	60
e. mobilization of the upper extremity	3.13	1.71	53
Medical technologist			
a. current advances	2.66	1.76	56
b. basic training	3.25	1.91	56

TABLE 18--CONTINUED

	$\bar{X}$	sd	n
Nurse's aide			
a. current advances	2.72	1.73	69
b. basic training	2.96	1.87	68
Radiologic technologist			
a. current advances	2.94	1.71	51
b. radiation safety	3.08	1.91	48
c. calculation of medical radiation dose	3.19	1.77	46
d. basic training	3.42	1.85	47

3. dietitian (range 2.35 to 2.69)
- current advances ($\bar{X}$ = 2.35)
4. emergency medical personnel (range 2.46 to 2.59)
- current advances ($\bar{X}$ = 2.46)
5. physical therapy (range 2.60 to 3.13)
- spinal cord injury evaluation and management ($\bar{X}$ = 2.60)
6. medical technologist (range 2.66 to 3.25)
- current advances ($\bar{X}$ = 2.66)
7. nurse's aide (range 2.72 to 2.96)
- current advances ($\bar{X}$ = 2.72)
8. radiologic technologist (range 2.94 to 3.42)
- current advances ($\bar{X}$ = 2.94)

The strongest pattern within the allied health field appears to be keeping the personnel abreast of current advances.

Needs which were added at more than one site for each of the groups included:

1. Community health
 - a. public education
 - b. training outreach workers

2. Dental assistant
 - a. career education
 - b. public education
3. Dietitian
 - a. obesity
 - b. nutritional implications of diabetes
 - c. nutrition during pregnancy
4. Emergency medical training
 - a. public education
 - b. continuing education
5. Nurse's aides
 - a. communication skills

One of the consistently added needs was health education for the consumer, a role which the allied health personnel is increasingly adopting.

Consumers

Of the 51 items listed for consumers in the medical and health area, the majority received very strong ratings. The range was from 1.68 to 3.04. The results are presented in Table 19. The strongest needs were identified as:

1. preventive measures in mental and emotional problems ($\bar{X} = 1.68$)
2. parent education in nutrition ($\bar{X} = 1.82$)
3. parent health education ($\bar{X} = 1.84$)
4. parent health education regarding venereal disease ($\bar{X} = 1.88$)
5. parent education in the dental areas ($\bar{X} = 1.92$)

It is quite notable that 4 of the 5 strongest rated needs focused on parent education. This is similar to the trend noted in the educational results.

TABLE 19
 MEDICINE AND HEALTH:
 CONSUMERS

	$\bar{x}$	sd	n
1. Preventive measures in mental and emotional problems	1.68	1.03	76
2. Parent education in nutrition	1.82	1.16	76
3. Parent health education	1.84	1.23	71
4. Parent health education regarding venereal disease	1.88	1.23	76
5. Parent health education in the dental area	1.92	1.18	75
6. Alcoholism	1.94	1.17	79
7. Home care of mental and emotional problems	1.97	1.07	73
8. Family health screening to detect medical disorders	1.99	1.40	79
9. Mental and emotional problems	2.01	1.19	69
10. Consumer health education for children	2.01	1.26	82
11. Link primary care to professional medical personnel	2.01	1.57	74
12. Simple home health techniques	2.04	1.15	76
13. Nutrition	2.08	1.28	78
14. Meeting the needs of individual's with specific nutrition problems	2.09	1.28	81
15. Meeting the needs of the elderly	2.09	1.21	80
16. Mental and emotional services for school children	2.11	1.37	71
17. Illness and accident prevention	2.14	1.23	79
18. Pre-natal health services	2.15	1.49	78

TABLE 19--CONTINUED

	$\bar{X}$	sd	n
19. Smoking	2.15	1.34	78
20. Home care during illness	2.16	1.15	76
21. Blood pressure health service	2.20	1.39	76
22. Parent health education concerning physical exercise	2.21	1.36	76
23. Drug education	2.24	1.27	79
24. The mental and emotional problems of senility	2.27	1.19	73
25. Care of sick and healthy children	2.29	1.21	77
26. Family reorientation	2.32	1.46	69
27. Early childhood health screening service	2.32	1.54	77
28. Maternal and child health	2.35	1.33	76
29. Pre- and post-natal mothers	2.35	1.39	80
30. Health services for heart patients	2.37	1.43	75
31. Choosing nonprescription drugs	2.37	1.50	79
32. Health services for cancer patients	2.39	1.35	74
33. Dentistry services for school children	2.40	1.50	74
34. Eye and ear testing for school children	2.43	1.47	74
35. Programs for heart patients	2.43	1.25	77
36. Programs for cancer patients	2.45	1.20	75
37. Post-hospital adjustment programs	2.49	1.38	76
38. Programs for diabetics	2.51	1.33	80
39. Programs for arthritics	2.52	1.31	71
40. Services for the retarded	2.56	1.39	79

TABLE 19--CONTINUED

	$\bar{X}$	sd	n
41. Speech and hearing therapy	2.56	1.41	72
42. Health services for school children	2.57	1.54	69
43. Chronic illnesses	2.57	1.23	77
44. Innoculation health services	2.59	1.63	76
45. Physical rehabilitation	2.60	1.24	74
46. Innoculation services for school children	2.71	1.64	73
47. Choosing a doctor	2.73	1.53	78
48. Immunization programs	2.76	1.50	75
49. Communicable illnesses	2.84	1.36	74
50. Programs for individuals with muscular dystrophy	3.00	1.37	69
51. Choosing a hospital	3.04	1.74	79

Needs which were added at more than one site included:

1. family planning and sex education
2. knowledge of the health system

Overall, a very strong need appears for both consumer education and the delivery of health services in Appalachia.

Priority Needs Identification

The results of priority needs identification are shown for the medical and health field in Table 20. The meeting by meeting breakdown for the 13 needs listed is shown in the table with X's representing the fact that the particular need was listed among the top five at the meeting.

TABLE 20
MEDICINE AND HEALTH:
RESULTS OF PRIORITY NEEDS IDENTIFICATION BY LOCATION

	Virginia	North Carolina	Alabama	West Virginia	Tennessee	Ohio	Georgia	South Carolina	Mississippi	Kentucky	Pennsylvania	New York
1. Interdisciplinary collaboration	X	X										
2. Mental health training										X		
3. Inservice training and updating in major clinical areas for health professions	X		X	X	X	X				X	X	
4. New approaches to health care	X											
5. Requirements of various control groups	X											
6. Patient education: basic nutrition, dentistry, infection control, use and abuse of drugs		X								X		X
7. Consumer education, including financing health care, preventive medicine (physical, mental, and dental), developmental aspects of health, and hygiene		X	X	X	X	X				X	X	
8. Emergency medical training		X								X		

TABLE 20--CONTINUED

	Virginia	North Carolina	Alabama	West Virginia	Tennessee	Ohio	Georgia	South Carolina	Mississippi	Kentucky	Pennsylvania	New York
9. Management and leadership training for all health personnel	X	X										
10. Health safety for all health personnel		X										
11. Programs for nurse's training			X	X							X	X
12. Environmental health: air and water pollution				X								
13. Sharing institutional resources and information retrieval					X					X		

Several consistent findings across meetings support the findings indicated by both the literature review, the ratings of the needs, and the addition of needs. Inservice training and updating in major clinical areas for health professionals was identified as a priority in eight of the nine states which completed the activity. The vagueness of this item probably reflects the uncertainty of specific needs in the medical and health fields. Nevertheless, this need is supported by the overall strong ratings of the majority of the needs listed on the medical and health assessment form.

A second very consistently identified priority was consumer education, including financing health care, preventive medicine (physical, mental, and dental), developmental aspects of health, and hygiene. The task of educating consumers in all of these areas involves a wide range of health professionals. The results of the needs ratings for consumer education were also very strong. . . .

Other areas which appeared to be priority needs across several sites were nurse's training and patient education concerning basic nutrition, dentistry, infection control, and the use and abuse of drugs.

Utilization Data

Although the exact utilization scheduling will depend on the target audience and the type of course, the medical and health representatives did not present a consistent pattern for utilization. Generally, it was indicated that consumers could best be reached in the early evening on weekdays. However, if the programs were designed for a particular group such as Head Start parents, pre- or post-natal women, or senior citizens, the programs might be broadcast during the day. Utilization schedules for health personnel ranged from during the day or evening on weekdays to Saturday and Sunday mornings. Arrangements to work around hospital shifts and clinic hours would have to be made to reach many of the medical and health personnel.

CHAPTER 5

BUSINESS AND INDUSTRY

While economic development has been a prime concern of ARC since its inception, the continuing educational needs of the business and industrial personnel have received little attention to date. The areas considered in the present needs assessment include supervisory and management training, employee relations, labor education, energy, environmental, and economic issues, and a variety of other areas.

The frequency of participants by position held in the business and industry domain is presented in Table 21. The largest group represented were the manufacturers, with representatives of economic and industrial development projects being the second largest group.

Supervisory and Management Training

The ratings of the needs for supervisory and management training were fairly high. They ranged from 2.00 to 3.13. The results of the ratings are presented in Table 22. The strongest needs were indicated in the following areas:

1. motivation ($\bar{X}$ = 2.00)
2. communications ($\bar{X}$ = 2.16)
3. human relations ($\bar{X}$ = 2.20)
4. leadership ($\bar{X}$ = 2.30)

Limited research has suggested a need for supervisory and management training in Appalachia, with special emphasis on leadership training.

TABLE 21

FREQUENCY OF PARTICIPANTS IN BUSINESS AND INDUSTRY BY POSITION IN WHICH EMPLOYED

Manufacturer	12
Economic and industrial development	7
College or university	6
Bank	4
Development district	4
Orchard	4
Educational cooperative	3
Chamber of Commerce	2
Utilities	2
Other	<u>7</u>
Total	51

Employee Relations

The ratings for the needs in the employee relations category indicated only a moderate to strong need, with a range from 3.65 to 3.91. The results of the ratings are presented in Table 23. The strongest needs identified were as follows:

1. negotiation processes ($\bar{X} = 3.65$)
2. arbitration ($\bar{X} = 3.80$)

However, the category of employee relations received a strong overall rating of 2.92.

TABLE 22

BUSINESS AND INDUSTRY:
SUPERVISORY AND MANAGEMENT TRAINING

	$\bar{X}$	sd	n
1. Motivation	2.00	1.15	49
2. Communications	2.16	1.46	50
3. Human relations	2.20	1.14	50
4. Leadership	2.30	1.27	50
5. Labor relations	2.35	1.21	48
6. Labor management	2.36	1.31	47
7. Economics	2.40	1.43	48
8. Performance evaluation	2.72	1.26	47
9. Work methods	2.86	1.31	49
10. Grievances	3.13	1.39	47

TABLE 23

BUSINESS AND INDUSTRY:
EMPLOYEE RELATIONS

	$\bar{X}$	sd	n
Employee relations	2.92	1.63	25
1. Negotiation processes	3.65	1.78	46
2. Arbitration	3.80	1.89	46
3. Bargaining unit issue	3.84	1.64	45
4. Mediation	3.91	1.74	46

Labor Education

The needs for labor education received strong to weak ratings, ranging from 2.64 to 4.03. The results of the ratings are presented in Table 24. The strongest needs indicated were:

1. economics ($\bar{X}$ = 2.46)
2. pension legislation ($\bar{X}$ = 3.29)

It should be noted that very few of the participants were employed in a "labor" position.

TABLE 24
BUSINESS AND INDUSTRY:
LABOR EDUCATION

	$\bar{X}$	sd	n
Labor education	3.36	1.50	14
1. Economics	2.46	1.54	48
2. Pension legislation	3.29	1.53	48
3. Labor law	3.31	1.68	48
4. Discrimination	3.46	1.63	43
5. Collective bargaining	3.80	1.54	46
6. Shop steward training	4.03	1.75	40

Energy, Environment, and Economy

The national fuel crisis and federal energy and environmental policies have forced the energy, environment, and economy issues to the forefront. The ratings for this section ranged from a fairly strong 2.45 to a very weak 4.96.

The results of the ratings are presented in Table 25. The strongest needs which were indicated included:

1. energy conservation ($\bar{X} = 2.45$)
2. waste disposal ($\bar{X} = 2.58$)
3. waste utilization ($\bar{X} = 2.61$)
4. socioeconomic development related to energy production in a planning sense, e.g., schools, hospitals, and health services ($\bar{X} = 2.67$)
5. integration of local needs and regional and federal environmental programs ($\bar{X} = 2.73$)

This is an area that has long been a high priority for ARC, as the concepts of energy conservation and production are very important to Appalachia.

Other Business and Industry Needs

A number of other areas were investigated in the present needs assessment regarding the needs of business and industry. These generally received fairly high ratings, ranging from 1.70 to 2.98, with the exception of mine safety which received a low rating of 4.13. The results of these ratings are presented in Table 26. The strongest needs were indicated as:

1. integrating business and industry with the school system ($\bar{X} = 1.70$)
2. federal, state, and local incentives to industry ($\bar{X} = 2.23$)
3. advice for small businesses including ($\bar{X} = 2.30$)
 - a. government rules and regulations ($\bar{X} = 2.09$)
 - b. interpretation of laws ($\bar{X} = 2.10$)
4. resource and job development ($\bar{X} = 2.34$)
5. industrial site planning ($\bar{X} = 2.52$)
6. occupational safety and health ($\bar{X} = 2.98$)

The business and industry representatives expressed much concern over their relationship with other systems such as the educational system and the government.

TABLE 25
 BUSINESS AND INDUSTRY:
 ENERGY, ENVIRONMENT, AND ECONOMY

	$\bar{X}$	sd	n
Energy, environment, and economy	3.05	1.50	21
1. Energy conservation	2.45	1.39	49
2. Waste disposal	2.58	1.65	43
3. Waste utilization	2.61	1.71	44
4. Socioeconomic development related to energy production in a planning sense, e.g., schools hospitals, and health services	2.67	1.30	43
5. Integration of local needs and regional and federal environmental programs	2.73	1.34	44
6. Regional energy environmental and socioeconomic issues	2.85	1.46	48
7. Effect of national energy policy on regional development	2.87	1.44	47
8. Environmental planning re: land stabilization	2.90	1.75	44
9. Environmental and social programs to meet local needs	3.02	1.69	48
10. Erosion control problems	3.37	1.75	38
11. Land stabilization	3.38	1.60	32
12. Strip mine reclamation	3.42	2.25	31
13. Mine reclamation	3.56	2.18	25
14. Gas and oil drilling	3.69	1.82	32
15. Land analysis by remote sensing technology	3.75	1.80	28
16. Acid mine drainage abatement	3.81	2.48	26
17. Land slide control	3.89	1.73	37

TABLE 25--CONTINUED

	$\bar{X}$	sd	n
18. Mine subsidence control	4.12	2.11	25
19. Mine flooding	4.19	2.15	26
20. Land stabilization: subsidence control	4.21	1.65	34
21. Mine sealing	4.42	2.14	26
22. Mine fire extinguishment	4.48	2.10	25
23. Sink holes	4.69	1.87	29
24. Natural hazards	4.72	1.81	25
25. Land slides	4.79	1.70	29
26. Mud slides	4.96	1.64	28

Needs which were added at more than one site included:

1. current government rules and regulations
2. motivation
3. accounting
4. communication skills

These additional needs complement the needs which were found to receive the highest ratings. They also reemphasize the concern regarding business and industry's relationship with government.

TABLE 26
 BUSINESS AND INDUSTRY:
 OTHER BUSINESS AND INDUSTRIAL NEEDS

	$\bar{X}$	sd	n
1. Integrating business and industry with the school system	1.70	.97	58
2. Federal, state, and local incentives to industry	2.23	1.28	48
3. Advice for small businesses	2.30	1.06	43
a. government rules and regulations	2.09	1.14	47
b. interpretation of laws	2.10	1.13	48
c. record keeping	2.29	1.29	48
d. merchandising	2.52	1.26	46
e. advertising	2.66	1.37	47
4. Resources and job development	2.34	1.27	44
5. Industrial site planning	2.52	1.28	46
6. Occupational safety and health	2.98	1.49	40
a. air pollution control	2.98	1.53	47
b. mine safety	4.13	2.03	32

Priority Needs Identification

The results of the priority needs identification are shown for the business and industry group in Table 27. The meeting by meeting breakdown given for the 10 needs listed is shown in the table with X's representing the fact that the particular need was listed among the top five at the meeting. The business and industry representatives exhibited a high degree of consistency in the identification of priorities across meeting sites.

TABLE 27

BUSINESS AND INDUSTRY:
RESULTS OF PRIORITY NEEDS IDENTIFICATION BY LOCATION

	Virginia	North Carolina	Alabama	West Virginia	Tennessee	Ohio	Georgia	South Carolina	Mississippi	Kentucky	Pennsylvania	New York
1. Occupational safety and health	X									X		X
2. Service for small businesses with emphasis on record keeping; interpretation of laws, government rules and regulations, accounting, management	X	X	X	X	X					X		X
3. Supervisory and management training with emphasis on performance evaluation, human relations, grievances, motivation, leadership	X	X	X	X	X					X		
4. Energy, environment, and economy with emphasis on energy conservation, mine reclamation, regional energy environmental and economic issues, land stabilization, and waste utilization	X	X	X	X		X					X	X
5. Inform adults about social security, and pension legislation	X				X							
6. Integrating business and industry into the education system		X		X	X	X					X	

TABLE 27--CONTINUED

	Virginia	North Carolina	Alabama	West Virginia	Tennessee	Ohio	Georgia	South Carolina	Mississippi	Kentucky	Pennsylvania	New York
7. Labor education, including discrimination, pension legislation, and labor laws		X									X	
8. Resource and job development, including vocational training			X		X					X		X
9. Coordination of agencies offering services in health, education, and welfare												
10. Labor-management relations			X			X					X	X

Advice for small businesses with emphasis on record keeping, interpretation of laws, government rules and regulations, accounting, and management received a priority rating in 7 of 9 states that established priorities. Energy, environment, and the economy with emphasis on energy conservation, mine reclamation, regional energy, environmental, and economic issues, land stabilization, and waste utilization also received a priority need rating in 7 of the 9 states that established priorities.

Other very consistently identified priorities included:

- 1) supervisory and management training with emphasis on performance evaluation, human relations, grievances, motivation, and leadership, and
- 2) integrating business and industry into the education system. The priorities are quite consistent with the results of the needs assessment ratings, as well as with the limited research which has been presented in the literature.

Utilization Data

The exact utilization schedule will depend on the target audience and the type program. Nevertheless, a number of similar patterns emerged across sites for the days and times which would be best to reach various target audiences. Basically, the business personnel could be reached during "business hours" or 9:00 am to 4:30 pm. However, several participants suggested the possibility of evening conferences. Participants also suggested releasing employees during working hours in order to continue their education. If such release time could not be arranged, evening programming could be used to reach this audience. In addition, the owners of small businesses could either be reached very early in the morning or in the late evening.

CHAPTER 6

HUMAN RESOURCES

Concern for the development of human resources in the Appalachian Region is a high priority for the ARC. However, the elements in human resource development are less easily defined than those of economic development. The areas explored in the current needs assessment included adult education, prison systems, recreation, social work, and rehabilitation services. For each of these areas the ratings of the needs and the additional needs are presented below. In addition, the identified priority needs and utilization schedule data for the human resources group are discussed.

The frequency of the participants by position held in the human resources field are presented in Table 28. The largest number of representatives came from various departments of human resources across the Region. In addition, a large number of representatives from the human resources components of the local development districts were present. Other well-represented areas included mental health and mental retardation personnel and rehabilitation and employment counselors.

Adult Education

The needs for adult education ranged from very strong to weak (2.31 to 4.61). Overall the area of adult education received a strong rating of 2.31. The results of the ratings are presented in Table 29. The strongest needs were identified as:

TABLE 28

FREQUENCY OF PARTICIPANTS IN HUMAN RESOURCES BY POSITION IN
WHICH EMPLOYED

Department of human resources	11
Development district human resources	10
Mental health and mental retardation	8
Rehabilitation and employment counseling	8
Aging	4
College or university	4
Welfare	3
Cultural and arts	3
Early childhood	3
Adult education	3
Community services	2
Health planning	2
Other	<u>2</u>
Total	63

1. how to find, get, and keep a job ($\bar{X} = 2.34$)
2. how to manage your children ($\bar{X} = 2.39$)
3. how to stay healthy ($\bar{X} = 2.50$)
4. what happens as you get older ($\bar{X} = 2.50$)

The highest need probably reflects the currently high unemployment rate. The strength of the need to learn to manage children supports educator's concerns for parent education. The need to learn how to stay healthy is supportive of the strong consumer education needs which were noted in the

TABLE 29

HUMAN RESOURCES:
ADULT EDUCATION

	$\bar{X}$	sd	n
Adult education	2.31	1.19	58
1. How to find, get and keep a job	2.34	1.50	64
2. How to manage your children	2.39	1.45	62
3. How to stay healthy	2.50	1.27	64
4. What happens as you get older	2.50	1.05	60
5. How to get help in your community	2.54	1.32	63
6. How to manage your money	2.68	1.37	63
7. What are your legal rights	2.72	1.45	64
8. How to solve your transportation problems	2.77	1.61	60
9. How to understand yourself	2.78	1.55	64
10. How to get along with your family	2.95	1.42	64
11. How to get more education	2.97	1.41	63
12. Taxes	3.00	1.61	61
13. Metric system	3.29	1.84	58
14. How to get along with friends and neighbors	3.63	1.29	63
15. How to use your spare time	3.93	1.41	62
16. How to get insurance	4.26	1.63	61
17. How to move to another town	4.61	1.29	63

medical and health area. Growing concern for the aged in this country is reflected in the fourth strongest need.

Needs which were added by participants from at least two sites included:

1. adult basic education
2. survival skills for older people
3. family planning
4. home management of basic diseases and disorders
5. vocational counseling and education

The literature strongly supports a need for adult basic education, especially in Appalachia where the illiteracy rate is higher than that of the nation.

Prison Systems

The ratings for the needs of the prison systems were fairly high with a range of 2.06 to 3.07. The results of the ratings are presented in Table 30. The strongest needs were identified as:

1. vocational training ($\bar{X} = 2.06$)
2. adult basic education ($\bar{X} = 2.43$)

Other needs which were added by participants at more than one site included:

1. individual and group counseling
2. community life and structure

The educational needs in the prison system have not been comprehensively studied. Yet, as one participant quipped, satellite delivery seems particularly suited to the prison system because the target population represents a captive audience.

TABLE 30
HUMAN RESOURCES:
PRISON SYSTEMS

	$\bar{X}$	sd	n
Prison systems	2.61	1.23	23
1. Vocational training	2.06	1.08	51
2. Adult basic education	2.43	1.27	51
3. College coursework	3.07	1.40	41

Recreation

Recreational development in Appalachia is currently a high priority for ARC. The ratings of the recreation needs were fairly high, ranging from 2.55 to 2.62. Overall, the area of recreation received a rating of 2.62. The results of these ratings are presented in Table 31. The strongest needs were identified as:

1. planning resources ($\bar{X} = 2.55$)
2. developing resources ($\bar{X} = 2.57$)

The additional need which was added to the list of recreational needs was:

1. senior citizen recreation activities

Once again this emphasizes the growing concern for the aged in America.

Social Work Services

The need for continuing education of social workers received an overall strong rating of 2.08. The ratings of the needs within this category were also strong, ranging from 2.16 to 2.70. The results of these ratings are presented in Table 32. The strongest needs were indicated as:

TABLE 31

HUMAN RESOURCES:
RECREATION

	$\bar{X}$	sd	n
Recreation	2.62	1.18	29
1. Planning programs	2.55	1.32	60
2. Developing programs	2.57	1.33	61

TABLE 32

HUMAN RESOURCES:
SOCIAL WORK SERVICES

	$\bar{X}$	sd	n
Social work services	2.14	1.04	36
1. Family counseling	2.08	1.02	63
2. Drug abuse	2.16	1.03	63
3. Child welfare	2.29	1.05	62
4. Supervisory training	2.70	1.26	56

1. family counseling ($\bar{X}$ = 2.08)

2. drug abuse ($\bar{X}$ = 2.16)

Needs which were added at more than one site included:

1. parenthood education and training
2. gerontology
3. approaches for social work intervention
4. dealing with the mentally retarded

This serves to reemphasize the comments made above concerning the pervasiveness of the needs for parent education and training in gerontology.

Rehabilitation Services

The overall rating for rehabilitation services was a strong 2.22. The ratings within this category were also generally strong, with a range of 2.40 to 2.62. The results of the ratings are presented in Table 33. The strongest needs were identified as follows:

1. occupational therapy ($\bar{X}$ = 2.40)
2. physical therapy ($\bar{X}$ = 2.50)

Additional needs which were suggested at more than one site included:

1. vocational rehabilitation counseling
2. vocational training
3. counseling and follow-up services
4. programs for the developmentally disabled

TABLE 33
HUMAN RESOURCES:
REHABILITATION SERVICES

	$\bar{X}$	sd	n
Rehabilitation services	2.22	1.01	36
1. Occupational therapy	2.40	1.37	55
2. Physical therapy	2.50	1.25	54
3. Social work	2.57	1.40	56
4. Speech and hearing therapy	2.62	1.44	55

Priority Needs Identification

The results of the priority needs identification are shown for human resources and services in Table 34. The meeting by meeting breakdown given for the 17 needs listed is shown in the table with X's representing the fact that the particular need was listed among the top five at the meeting.

The most consistently identified priority was training for parent-hood, including family life education and money management skills. As mentioned previously, this area was also identified as a priority area by educators and medical and health personnel.

Other consistently noted priorities included:

1. professional training, such as a master's program in social work
2. training necessary for getting and keeping a job, and opportunities for vocational training
3. planning and collaboration involving a variety of human services agencies

The last priority mentioned is of particular interest since ARC recently funded such a demonstration project in South Carolina (Human Services Coordination Project, Dec. 1973 - Jan. 1974).

Utilization Data

The exact utilization scheduling will depend on the target audience and the type of course. Nevertheless, a number of similar patterns emerged across sites for the days and times that would be best to reach various audiences. Generally, it was indicated that early evening would be the best time to reach consumers, unless they were members of particular groups. For example, programming for the unemployed could be conducted during work

TABLE 34

HUMAN RESOURCES:
RESULTS OF PRIORITY NEEDS IDENTIFICATION BY LOCATION

	Virginia	North Carolina	Alabama	West Virginia	Tennessee	Ohio	Georgia	South Carolina	Mississippi	Kentucky	Pennsylvania	New York
1. Training for parenthood, including family life education and money management	X			X						X	X	X
2. Professional training such as a master's in social work program	X				X						X	X
3. Training necessary for getting and keeping a job, and opportunities for vocational training	X									X		
4. Planning and collaboration involving a variety of human service agencies, including a cooperative information retrieval system	X	X								X	X	
5. Training for foster parents	X											
6. Upgrading low income housing by educating people regarding home improvement, repairs, insulation, and financing										X	X	
7. Consumer education regarding medical services, nutrition, health, management		X					X					

TABLE 34--CONTINUED

	Virginia	North Carolina	Alabama	West Virginia	Tennessee	Ohio	Georgia	South Carolina	Mississippi	Kentucky	Pennsylvania	New York
8. Planning seminars and public information concerning transportation		X										
9. Life management skills for the elderly and training in these for social service workers			X								X	X
10. Rehabilitation services for physically, mentally, and socially disabled			X		X					X		
11. Alcohol and drug abuse information				X								
12. Generating community involvement				X								
13. Human rights information				X								
14. Adult education in survival skills					X							
15. Prison systems			X		X							
16. Planning and provision of recreation facilities, and bringing the arts to people					X							X
17. Training of preschool teachers in child development						X						X

hours. Programming for the aged could be scheduled for late morning or early afternoon.

Continuing education programs for many social service workers would best be presented early in the morning or in the late afternoon. Several participants did suggest that if college coursework were being offered that it be broadcast in the early evening.

CHAPTER 7

GOVERNMENT

The needs of government in Appalachia are spread across the many levels of government found there. The present assessment investigated the needs of the local development districts, state, regional, and local planning agencies, community development agencies, and local government. For each of these areas, the ratings of the needs assessment and the additional needs are presented below. In addition, the identified priorities and the utilization schedule data for the government area are discussed.

The frequency of the participants by position held in the government area is presented in Table 35. The largest numbers of representatives was from the development districts. Representatives of human resource agencies and state government were also numerous.

Local Development Districts

The ratings for continuing education for local development district personnel were fairly high, ranging from 1.94 to 3.15. The results of the ratings are presented in Table 36. The strongest needs were identified as follows:

1. economic development ($\bar{X} = 1.94$);
2. manpower planning ($\bar{X} = 2.50$)

TABLE 35

FREQUENCY OF PARTICIPANTS IN GOVERNMENT BY POSITION IN WHICH EMPLOYED

Development district	10
Human resources	7
State government	7
Industrial and economic development	5
City government	5
County government	4
County commission	3
Health planning	3
Water resources	3
Tax assessors	2
Other	4
Total	53

TABLE 36

GOVERNMENT:
LOCAL DEVELOPMENT DISTRICTS

	$\bar{X}$	sd	n
1. Economic development	1.94	1.26	53
2. Manpower planning	2.50	1.53	46
3. Housing planning	2.57	1.60	51
4. Early childhood education planning	2.69	1.52	48
5. Educational planning	2.77	1.42	49
6. Aging	2.91	1.40	47
7. Law enforcement	3.15	1.60	53

Needs which were added at more than one site included:

1. environmental planning
2. energy resources
3. availability of financial resources

Economic development and planning has been an important role for local development districts.

State, Regional, and Local Planning Agencies

The ratings for the needs of state, regional, and local planning agencies were rather strong, ranging from 2.08 to 2.67. The results of the ratings are presented in Table 37. The strongest needs identified included:

1. long range planning ($\bar{X} = 2.08$)
2. relations between government and community ($\bar{X} = 2.18$)

Needs which were added included:

1. strategies for citizen participation
2. management and planning training
3. fiscal problems

TABLE 37
GOVERNMENT:
STATE, REGIONAL, AND LOCAL PLANNING AGENCIES

	$\bar{X}$	sd	n
1. Long range planning	2.08	1.44	50
2. Relations between government and community	2.18	1.44	51
3. Technical assistance	2.39	1.42	46
4. Change strategies	2.67	1.34	42

Community Development Agencies

The ratings for the needs of community development agencies were fairly strong, with a range of 2.67 to 3.20. The results of the ratings are presented in Table 38. The strongest needs identified were as follows:

1. community problems, e.g., juvenile delinquency ($\bar{X} = 2.67$)
2. cultural activities ($\bar{X} = 3.04$)

An additional need suggested by participants at more than one site included:

1. initiation of youth programs

TABLE 38
GOVERNMENT:
COMMUNITY DEVELOPMENT AGENCIES

	$\bar{X}$	sd	n
1. Community problems, e.g., juvenile delinquency	2.67	1.49	52
2. Cultural activities	3.04	1.48	50
3. Contemporary affairs	3.20	1.45	44

Local Government

The ratings for the needs of local government personnel ranged from very strong to moderate. The ratings ranged from 2.12 to 3.74. The results of the ratings are presented in Table 39. The strongest needs were indicated as follows:

1. land resource management ($\bar{X} = 2.12$)
2. budgeting and accounting systems ($\bar{X} = 2.46$)
3. public transportation systems ($\bar{X} = 2.69$)
4. tax assessment ($\bar{X} = 2.79$)

TABLE 39
GOVERNMENT:
LOCAL GOVERNMENT

	$\bar{X}$	sd	n
1. Land resource management	2.12	1.25	48
2. Budgeting and accounting systems	2.46	1.79	48
3. Public transportation systems	2.69	1.54	48
4. Tax assessment	2.79	1.58	46
5. Public works and maintenance	2.79	1.56	48
6. Law enforcement	2.98	1.39	51
7. Fire department	3.29	1.50	49
8. Civil defense program	3.74	1.79	46

An additional need which was suggested by participants at more than one site was:

1. supervisory and management training

While no comprehensive assessment of the needs of government personnel is yet available, many of the above-mentioned needs were recognized by ARC as "specific and important needs" in various districts of Appalachia (Local Development Districts launch demonstration projects, Dec. 1973 - Jan. 1974).

Priority Needs Identification

The results of the priority needs identification are shown for the government area in Table 40. The meeting by meeting breakdown given for the 9 needs listed is shown in the table with X's representing the fact that the particular need was listed among the top five at the meeting.

TABLE 40

GOVERNMENT:
RESULTS OF PRIORITY NEEDS IDENTIFICATION BY LOCATION

	Virginia	North Carolina	Alabama	West Virginia	Tennessee	Ohio	Georgia	South Carolina	Mississippi	Kentucky	Pennsylvania	New York
1. Planning and programming for the aged		X										
2. Public safety programming and planning for local government		X										
3. Regional development of human resource planning with emphasis on early childhood, prevention of juvenile delinquency, and unemployment		X		X					X			X
4. Government-citizen dialogue				X		X						X
5. Economic development				X							X	X
6. Programs for the public concerning the use of taxes in public finance				X		X						X
7. Orientation of local elected, appointed, or hired officials on powers, duties, and responsibilities of office										X		X
8. Community management including development of data base, fiscal affairs, utility operation, and government program information										X		
9. Community improvement including building and housing code benefits, planning, sanitary landfill, aesthetics									X		X	X

The most consistently identified priority was regional development of human resource planning with emphasis on early childhood, prevention of juvenile delinquency, and unemployment. Other areas which received frequent mention as priorities included:

1. government-citizen dialogue
2. economic development
3. programs for the public concerning the use of taxes in public finance
4. community management, including development of a data base, fiscal affairs, utility operation, and government program operation
5. community improvement including building and housing code benefits, planning, sanitary landfill, and aesthetics

Utilization Data

The exact utilization schedule will depend on the target audience and the type of course. Nevertheless, a number of similar patterns emerged across sites for the days and times that would be best to reach various audiences. A small number of the government representatives suggested that programs be broadcast during the working hours of 9:00 a.m. to 4:30 p.m. on weekdays. The majority of the participants suggested that programs for elected officials be broadcast in the early evening, particularly when the programs involved interaction between citizen groups and government officials.

CHAPTER 8

SUMMARY AND CONCLUSIONS

A determination of needs in the Appalachian Region was conducted for the purpose of providing information relative to programming priorities during the forthcoming phase of operation for the Appalachian Education Satellite Project. The needs determination included a review of the literature describing needs in Appalachia (reported in AESP Technical Report #13) and a series of needs assessment conferences (which are the focus of this report). The study considered needs in five areas: education, medicine and health, business and industry, human resources and services, and government.

The needs assessment conferences were conducted during the months of March through May of 1976, in 12 of the 13 Appalachian states. Over 400 persons from each of the 5 needs areas attended these meetings. The process of identifying needs at these conferences varied somewhat from state to state, but it basically included several tasks. First, each participant was asked to complete a Needs Assessment Form by rating the series of need statements from one of the five need areas. Participants could write in any additional needs they felt should be included. Attendees then participated in a small group discussion (by area) and priority need determination. The latter task consisted of establishing five priority needs in the area represented by the group. Lastly, each group completed a utilization schedule which provided information concerning the days of the week, times of the day

and program format which would be best to reach their target audience.

The data generated by this process are too extensive to be summarized in a few summary statements. The results presented in this report are best used to determine priorities within particular programming areas and are most useful for this purpose as they have already been presented. However, one or two observations might be offered at this point. In general, almost all needs included on the rating forms were rated fairly high by the participants. This is not surprising since the items on the rating forms were documented needs obtained from the literature review. The general conclusion might be that there are so many needs prevalent in Appalachia suggestive of AESP programming that it is hard to know where to begin.

However, as the participant ratings and priority determinations indicate, there are gradations of severity within and across the 5 needs areas. Thus, it is suggested in this report that a variety of programs relative to top priority needs be considered within each of the 5 areas, based on the availability of existing programming or of funds to develop such programming. Therefore, the greatest impact of this study is probably to expand rather than restrict the directions which AESP programming should take.

APPENDIX
COMPLETE LIST OF ADDITIONAL NEEDS

Education

I. Inservice education for elementary teachers

1. Teacher made materials
2. Curriiculum theory and application
3. Expertise from national, state, local and other universities, conferences--reading, math, science, etc.
4. Metric system
5. In-service teacher training re: computer assisted instruction
6. DPI in basic skills instruction
7. Parent education
8. Adult education
9. Staff development
10. Early childhood education
11. Early childhood handicapped education
12. Fine arts
13. Other cultures
14. How the regular classroom teacher deals with the special education child
15. Languages
16. Gifted and talented
17. Mainstreaming of special education
18. Parents as teachers of children
19. Academic areas for adult education
20. Training for specialized areas
21. Re-alignment of male employment

22. Self-enrichment
23. Working with disadvantaged
24. Working with handicapped
25. Family relationships
26. Alternatives to alcohol abuse
27. Inservice teacher training in problem area
28. Counseling skills for para-professional
29. Language development
30. Interagency cooperation
31. International education
32. Energy education
33. Value education
34. Motivation
35. Updated research results on child growth/development
36. People to people
37. Art
38. Parent-teacher relations
39. Nutritional needs for parents
40. Hands-on technical education
41. Education as tool for development

II. Inservice education for secondary teachers

1. Languages
2. Reading in content area
3. Gifted and talented
4. Staff development
5. The emotionally disturbed adolescent

6. Psychology of learning
7. Behavioral psychology
8. Student behavior
9. Fine arts
10. Academic areas for adult education
11. Training for specialized areas
12. Language
13. Parent education
14. Reading-development
15. Reading-corrective
16. Energy education
17. Metric system
18. Business education (separate from consumer education)
19. Procedures to develop creativity
20. Home economics (family living)
21. Art education
22. Hands-on technical experience in career areas

III. Skills and strategies

1. Family living
2. Changing concepts of family
3. Grading techniques
4. Teaching the mentally gifted
5. New materials in various contents
6. Strategies of classroom discipline
7. Development of competency based education utilizing community learning
8. Humanities

9. Enhancing self-concept
10. Utilization of questioning techniques related to higher levels of cognitive domain
11. Training for paraprofessionals
12. Community involvement, lack of cooperation
13. Media resource center
14. Parent training

IV. Educational issues

1. Educational leadership
2. Educational financing
3. Public relations for education
4. Employee relations
5. Staff development
6. Educational planning
7. Grievance procedure - binding arbitration
8. Funding pattern for each state
9. Legal aspects of education - classroom law
10. Research
11. Student evaluation - grading
12. Testing
13. Improvement of management skills
14. Access of community to educational process
15. Role of private institutions
16. Accountability by county educators to county taxpayers
17. Professional development (what is new and effective) in a general format
18. Parents, government, etc./accountability

19. Community education concepts
20. Course of study (curriculum)
21. Administrative procedures pertaining to federal and state legislation

V. Special education for regular classroom teacher

1. Legal aspects and due process
2. Individualized instruction to meet needs
3. Mainstreaming
4. Interdiscipline/mainstream - skills
5. Characteristics of sensory impaired
6. Learning impaired
7. Involvement for children in regular classroom
8. Utilization of teaming (within school, community agencies)
9. How to talk to parents about child
10. How to cooperate with other agencies to help handicapped child
11. Educational needs of severely/profoundly retarded
12. Counseling/handicapped
13. Sex education/exceptional child especially M.R.
14. Skills for visually impaired
15. Skills for the deaf
16. Speech and hearing teacher training
17. Assisting parents in teaching handicapped children

IV. Special education for the special education teacher

1. Working with parent and community
2. Individualization techniques (specific) i.e., learning centers
3. Reading - materials and methods of teaching

4. Characteristics of sensory impaired children and adults
5. Skills for visually impaired
6. Skills for the deaf
7. How to give tests to handicapped
8. Language and speech
9. Handicapped
10. Severely retarded
11. Profoundly retarded
12. Homebound students
13. Recruiting
14. Materials identification
15. Educational needs of severely/profoundly handicapped

VII. Career counseling

1. Follow-up; how to do it?
2. Interview techniques - what to do and what not to do
3. Placement and follow-up
4. Skill teaching
5. Family living
6. Vocational diagnostic program
7. Hands-on career exploration

VIII. Early childhood education

1. Positive parent training
2. Community agencies - services
3. Infant education (0-3 year old instruction)
4. Using teaching aides in early childhood education
5. Health

IX. Vocational education

1. Teacher education - vocational education
2. Training of firemen
3. Training for E.M.T.
4. Development of tourism, recreation
5. Small business operations
6. Program individualization
7. Placement services
8. Orientation to adult education
9. Techniques for teaching adults
10. Agriculture as avocation (horticulture as leisure time activity)
11. Interdiscipline-work with other areas of school program
12. Genuine career - technical programs
13. Co-op program
14. Integration of business, industries, education
15. Trade and industrial education
16. Arts fair and craft
17. Services education - how to provide services to consumers

X. Information systems

1. Need for more information relay to community at large
2. Use of computerized interactive games, simulations
3. Utilizing local resources for information
4. Referral system
5. Using all agencies' information
6. Use information for long range planning

Medicine and Health

I. Physicians and physician's assistants

1. Services provided by other disciplines
2. Collaboration between health disciplines
3. Leadership
4. Total program planning and evaluation
5. Dental health care - prevention
6. Oral hygiene - infancy - early childhood
7. Teacher education - dental
8. Child abuse and its ramifications
9. Specifics on RX hypoglycemia
10. Periodontal diseases
11. Carious lesions of teeth
12. Other oral diseases
13. Physicians in rural areas
14. Nurse practitioners as physician extenders
15. Nursing audit
16. Infant stimulation
17. Mental retardation
18. Stress reduction
19. Exercise counseling
20. Early case finding/self diagnosing
21. Patient referral
22. Methods for financing primary care
23. Communication skills
24. Public education
25. Pediatric mental health

26. Family therapy
27. Family oriented physicians
28. Community health problems
29. Legislation and administration
30. Alcoholism and drug abuse
31. Problems of aging - gerontology
32. Nursing homes - programs for staff and patients
33. Family planning
34. Manpower
35. Continuing education for continuing certification

II. Nurses

1. Need for graduate courses in nursing
2. Problem identification
3. Problem solving
4. Patient education
5. Quality assurance
6. Implementing - managing change
7. Mental retardation
8. Genetic disorders
9. Community mental health needs
10. Leadership and management
11. Principles of management and supervision
12. Use of self as therapeutic agent
13. Crisis intervention
14. Clinical nurse practitioner
15. Nursing process

16. Referral and placement
17. Patient and family teaching - prevention
18. Degree programs
19. Nursing audit
20. Patient total assessment
21. Public health training
22. Trauma patients
23. Orthopedic patients
24. Child birth education
25. Neurological nursing
26. Rehabilitation
27. Periodontal diseases
28. Carious lesions
29. Other oral disease
30. Drug compliance
31. Patient compliance
32. Mental trauma
33. Community health nursing
34. Trends in nursing education
35. Upper level degree, credit courses, in nursing (towards B.S. in nursing)
36. Masters and doctoral level courses in nursing
37. Writing workshops to increase nurses abilities in written communication
38. Media workshops - use of media in patient/client education
39. Family planning
40. Rehabilitation care
41. Evaluation of health care
42. Patient teaching
43. Parent education

III. Mental health professionals

1. Mentally retarded generation after generation and high birth rate of these individuals
2. Continuing education for present staff from other professions
3. Preventive counseling
4. Rage prevention
5. Crisis intervention
6. Treating drug abuse
7. Student interns
8. Consulting psychologists and other MH staff
9. Inservice training for personnel (new) in field
10. Training by personnel
11. Continuing education for professionals
12. Public acceptance education
13. Making community more aware of need for additional staff
14. Role of mental health in the community
15. Child abuse
16. Behavior identification and value clarification as related to preventive dentistry
17. Mental retardation
18. Training in activities of daily living
19. Infant screening-infant stimulation
20. Family planning
21. Physicians rural
22. Nurse practitioners
23. Psychoeducational facilities
24. Community education and problem statement
25. Retardation
26. Psychosomatic medicine

IV. Allied health personnel

A. Dental assistant and hygienist

1. Nutrition effects on dental care
2. Fluoride benefits
3. Dental careers
4. Nutrition education
5. Consumerism in dentistry
6. Public awareness/education
7. Nutrition education/dental health
8. Training for families of disabled
9. Actual techniques (physical) in prevention
10. Water treatment
11. Office management
12. School preventive dentistry programs
13. Periodontal dentistry
14. Prosthetic dentistry
15. Manpower
16. Career education

B. Radiologic technologist

1. Safety in dental radiation
2. Necessity of dental, x-ray, in prevention and treating

C. Physical therapy

1. Preventive dentistry for handicapped people
2. Manpower
3. Training for family member of disabled
4. Recruitment of physical therapists

D. Dietitian

1. Nutritional implications - diabetes
2. Language and cultural blocks to nutrition teaching
3. Obesity
4. Nutrition during pregnancy
5. Physical fitness and exercise
6. Nutrition for the well being of the total family
7. Variations in food choice in an adequate diet
8. Patient education
9. Counseling patients
10. General knowledge in sugar effects
11. Nutrition - high blood pressure
12. Nutrition - importance for all age groups
13. Nutritional implication of carious lesions
14. Nutritional implication of periodontal disease
15. Specific problems with newborns
16. Nursing home dietitian and food supervision

E. Community health

1. Basic cardiac life support
2. Sanitation
3. Health engineering
4. Individual water supply protection
5. Solid waste handling and disposal
6. Food safety
7. Laws vs. regulations
8. Effective enforcement channels
9. Medical consumerism

10. Continued education for health professionals in remote areas
11. Prenatal care
12. Patient oriented health education
13. Outreach workers
14. Transportation to health care-awareness
15. Rural health clinics-awareness
16. Availability of other medical resources

F. Medical technologist

1. Review and update on basics
2. Safety education -- layman
3. Train to read EKG
4. Repair of instruments
5. Prenatal diagnosis
6. Fetal monitoring
7. Recruitment of medical technologists
8. Histology education

G. Nurse's aide

1. Dental knowledge
2. Advanced training in special areas
3. Basic training to include preventive dentistry
4. Communications skills
5. Review and update on basics
6. Special needs of the elderly client/patient
7. Special needs of the psychiatric patient
8. Training with a mental retardation emphasis
9. Communication skills
10. Social studies

11. Training-psychiatric emphasis
12. Training to work with geriatrics

H. Emergency medical training

1. Public education
2. Advanced training
3. Training the first responder
4. Home remedies of some dental emergencies
5. Advanced shock-trauma
6. Telemetry
7. High risk infants
8. Cardio pulmonary resuscitation training for the masses and other first aid techniques
9. EMS administration
10. Behavioral emergencies in emergency medical services
11. Care and transportation of patients
12. Cardiac care
13. Continuing education and reinforcement
14. Communication skills

V. Consumers

1. Dental prevention programs for teachers
2. Dental prevention programs for patients
3. Home safety
4. Medicine cabinet precautions
5. Oral health
6. Sex in our school
7. Teaching parents to accept sex education

8. When to use the emergency room and when not to use it
9. Day care services - developmental - not custodial
10. Industrial health - noise pollution
11. Parenting skills
12. Interaction of consumer and health service delivery system
13. Consumer's responsibility in health care
14. Family planning
15. Health career planning
16. Knowledge of health system
17. Knowledge of health professions - a career
18. Transportation

Business and Industry

- I. Supervisory and management training
 1. Industrial technology
 2. American free enterprise system
 3. Quality control
 4. Training techniques
 5. Attitude
 6. Safety management
 7. Organizational development
 8. Government rules and regulations
 9. Equal opportunities
- II. Labor education
 1. Role of federal agencies in discrimination, pension legislation, labor law and collective bargaining
 2. American free enterprise system
 3. Vocational training for a trade
 4. Right to work
- III. Employee relations
 1. Counseling
 2. Occupational alcoholism
 3. Peer and team problem solving
 4. Free enterprise economics
- IV. Energy, environment, and economy
 1. Public information on mine reclamation
 2. Public information on energy crisis
 3. Government rules and regulations regarding environmental issues
 4. Leasing of mineral rights

V. Other

1. Attracting industry
2. Laws regulating union officials
3. Market research
4. Integrating youth into business
5. Investments
6. Agencies that will help the small business
7. Technical "on the job" assistance
8. Education for sub-management personnel
9. Motivation for hourly employees
10. Career exploration using business leaders in education
11. Accounting
12. Management - motivation
13. Communications
14. Vocational training for practical jobs in industry such as supervisors, electricians, mechanics, etc.
15. Financing of public education systems
16. Office administration of payroll, taxes, cost accounting, invoices, billings, etc.
17. OSHA methods
18. Needs and motives of business and industry
19. Better understanding of government controls
20. Tourism
21. Individual entrepreneurship development
22. Interpreting financial records
23. Involving labor organization in career education
24. Graduate training
25. Areas of cooperation between agriculture-industry-labor

- 26. Business administration, business management
- 27. Communications-economics
- 28. Current government regulations and rules in all previously mentioned topics
- 29. Interviewing and processing of personnel

Human Resources

I. Adult education

1. Interagency collaboration
2. Education for parenthood
3. Infant stimulation
4. Family planning
5. Expectation of development of children
6. Retirement income plans and activities
7. Realignment of male image employment
8. Basic family health
9. Adult basic education
10. Survival skills - older Americans
11. What to do and opportunities for assistance
12. What makes you poor and what can be done about it
13. Vocational counseling
14. Birth control education
15. Home management of basic diseases and disorders
16. Basic cardiopulmonary (CPR) resuscitation and EMC
17. Living alone
18. Community education and schools
19. Housing information
20. Vocational courses at night in strategic areas
21. Health resources
22. Basic education
23. How and where to find childcare
24. Nutritional needs
25. Basic education

26. Developing your own potential as a human being
27. Consumer education
28. How to attract and keep skilled professionals in human services
29. Keeping in touch with the world of young people

II. Prison systems

1. Preparation for re-entry
2. Survival within prison (social and physical)
3. Community living skills
4. Individual and group counseling
5. Rehabilitation services
6. Job placement
7. Vocational techniques
8. Encounter or interpersonal relations
9. Community, social structures
10. Dealing with adolescence
11. Emotional problems of living
12. Community college
13. Values clarification
14. Specialized graduate programs
15. Psychology of aging
16. Community characteristics
17. Develop and build attitudes regarding recreation planning
18. Reality orientation
19. Human potential, self worth concept building

III. Recreation

1. Senior citizen center development
2. Senior citizen clubs
3. Human self-fulfillment (actualization)
4. Tourism
5. Youth Recreation Centers
6. Transportation to recreation centers
7. Senior citizens recreational activities
8. Recreation services to developmentally disabled
9. Facilities

IV. Social work services

1. Improved programs (elderly)
2. Changing attitudes toward social work services
3. Better leadership
4. More practical applications
5. Home care maintenance for elderly
6. Supervised housing recruitment
7. Basic daily living skills for retarded/institutionally reared people
8. Childhood screening
9. Adolescent group therapy homes
10. Parenthood education and training
11. Transportation
12. Communication skills
13. Cultural differences
14. Approaches regarding social work interaction
15. Individual problems

16. Home making skills
17. Interviewing skills
18. Teenage sexuality
19. Alcoholic abuse
20. Nutrition education
21. Day care education
22. Headstart program
23. Employment counseling
24. Training for foster care families
25. Family
26. Parenting
27. In-service training for social workers
28. Basic gerontology
29. Planning, evaluation of social programs
30. Preparation for retirement
31. Management system training
32. Protective services for adults
33. Mental health - mental retardation
34. Day treatment and day training programs
35. Working with the MR in the home
36. The MR as a human being
37. Involving the MR in community

V. Rehabilitation services

1. Creativity self-discovery
2. Expanded programs for developmentally disabled child
3. Vocational training

4. Information and referral re: existing services
5. Reality orientation
6. Educational services to blind
7. Developmentally disabled
8. Teaching the MR to work
9. Socialization for the MR
10. Rehabilitation counseling
11. Vocational counseling
12. Cultural enrichment
13. Cultural identity
14. Community involvement, coordination and development
15. Continuing education

Government

I. Local development districts

1. Environmental protection
2. Land use planning
3. Community facilities and services
4. Availability of financial resources (how to obtain and utilize)
5. Relationship between public and private sector - liaison and participation
6. Ecological and sewage (clean water) support assistance
7. Infrastructure needs in job creation
8. Housing - access at reasonable cost
9. Job information
10. Education of local officials re: roles and responsibilities
11. Labor and management cooperation in economic development
12. Legislative construction and process (Passage)
13. Regional transportation
14. Energy resources
15. Health services
16. Recreation
17. Investment strategies
18. Delivery of health services
19. Energy
20. Environmental
21. Manpower implementation (job matching process, etc.)
22. Solid waste resource recovery implementation strategies
23. Allied health training
24. Regionalization (regional cooperation)
25. Short and long range programming

26. Project and contract administration
27. Grantmanship for local officials
28. County school closed circuit television
29. Public facilities construction

II. State, regional, and local planning agencies

1. Human resources allocation
2. Local management and planning training
3. Revenue sharing
4. Recruitment of board members
5. Immediate term project planning and implementation
6. Beautification of downtown
7. Recreation
8. Grantsmanship
9. Program development
10. Personnel management
11. General administration
12. Collective bargaining in the public sector (labor, management, applied to industries)
13. Natural disasters
14. Continuing education for local employees (municipal and county)
15. Citizen participation
16. Supervisory training
17. Prevention of child abuse by support system to abusing parents
18. Use of retirement preparation to utilize skills of elderly in active roles of government review

19. Local government elected officials in need of training
20. Professionalism in a political setting
21. Decision making and decision making tools

IV. Community development

1. Community goals - social, economic and physical
2. Education of public on programming and processes
3. Local community conflict management
4. Local comprehensive planning and strategies
5. Real understanding of resources
6. Initiation of youth programs
7. Initiation of senior citizen programs
8. Ecological needs and plans to handle
9. How resources are used and who is eligible (usage and gaps)
10. Local police understanding of community groups and their problems
11. Educational seminar directed toward the juvenile and general public with input from both
12. Seminar for the general public on how to cope with juvenile delinquency
13. Central business district revitalization

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